

Remarks/Arguments:

Claims 1-51 are pending and rejected in the application. Claims 1, 12, 21, 24, 26, 28, 30, 32, 37, 40, 43, 45, 47 and 51 are amended. No new matter has been added.

On page 2, the Official Action rejects claims 12, 21, 24, 26, 28, 30, 37, 40 and 47 under 35 U.S.C. §112 for being indefinite due to "relative" terms. In order to expedite prosecution, Applicants have amended the claims to remove the relative terms. Withdrawal of the rejection is respectfully requested.

On page 3, the Official Action rejects claims 1-4, 9-15, 17-18, 31, 43, 46-49 and 51 under 35 U.S.C. §102(b) as being anticipated by Rabenko (U.S. 6,765,931). It is respectfully submitted, however, that the claims are patentable over the art of record for at least the reasons set forth below.

Applicants' invention, as recited by claim 1, includes features which are neither disclosed nor suggested by the art of record, namely:

... a satellite positioning system ... comprising ...

a signal processing system coupled to the processor and operating in accordance with a low resolution operational mode and a high resolution operational mode ... for determining a position of the SPS receiver ... includes ...

a signal processing subsystem... includes... at least one matched filter having a number of correlators automatically configured ...

a fast Fourier transform (FFT) subsystem ... having at least one of a number of inputs and a transform size automatically configured ...

a memory subsystem having a memory allocation to the subsystems automatically configured ...

Claim 1 relates to an SPS receiver that performs signal processing on received SPS data in order to determine location. Specifically, the receiver includes a signal processing system that has a signal processing subsystem, an FFT subsystem and a memory subsystem for processing the data. Depending on whether the receiver is in the low resolution operational mode or the high resolution operational mode, each of the three subsystems is automatically configured (e.g., the matched filter in a signal processing subsystem has its number of

correlators configured, the FFT subsystem has its number of inputs and transform size configured, and the memory subsystem has its memory allocation for each subsystem configured). Support for these features can be at least found in paragraphs [0162], [0167], [0179], [0194], [0195], [0198], [0248] and [306] of Applicants' specification. No new matter has been added.

Rabenko suggests a system that includes a gateway which facilitates bidirectional communication between telephone devices. Specifically, the Examiner suggests that Rabenko's system has a signal processor subsystem, an FFT subsystem and a memory subsystem. However, Rabenko is not related to an SPS receiver that processes SPS data. Furthermore, Rabenko's system does not suggest a low resolution operational mode and a high resolution operational mode wherein the signal processing subsystem, the FFT system and the memory system are configured into two different configurations (i.e., a first configuration and a second configuration).

Applicants' claim 1 is different than Rabenko because it includes a satellite positioning receiver. Specifically, the SPS receiver which includes a signal processing subsystem, an FFT subsystem and a memory subsystem, is able to operate in at least two different operational modes (e.g., the low resolution operational and a high resolution operational mode). The low resolution and high resolution operational modes are operational modes for determining the position of the receiver.

Depending on whether the SPS receiver is in the low resolution operational mode or the high resolution operational mode, the subsystems are automatically configured accordingly. For example, the signal processing system includes a matched filter which has its number of correlators automatically configured in two different configurations depending on the operational mode. The FFT subsystem has its number of inputs and transform size automatically configured into a first and second configuration depending on the operational mode. The memory subsystem has its memory allocation for each subsystem automatically configured in either a first configuration or a second configuration based on the operational mode. Thus, based on the selected operational mode (low resolution or high resolution), each of the three subsystems automatically configures itself into either a first configuration or a second configuration. Support for these features can be at least found in paragraphs [0162], [0167], [0179], [0194], [0195], [0198], [0223-0243], [0248] and [0306]. No new matter has been added.

Independent claims 43 and 51 have similar features to independent claim 1. Thus, independent claims 43 and 51 are also patentable over Rabenko for at least the reasons set forth above.

Dependent claims 2-4, 9-15, 17-18, 31 and 46-49 include all of the features of the claims from which they depend. Thus, these claims are also patentable over the art of record for at least the reasons set forth above.

On page 9, the Official Action rejects claim 5 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Kanack (U.S. 6,263,034). Kanack is relied upon for filter control parameters. Kanack, however, does not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 5 is also patentable over the art of record for at least the reasons set forth above.

On page 9, the Official Action rejects claim 6 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Coleman (U.S. 3,939,474). Coleman is relied upon for suggesting coherent data in signal processing. Coleman, however, does not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 6 is also patentable over the art of record for at least the reasons set forth above.

On page 10, the Official Action rejects claims 7, 16, 19-20 and 23 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Sih (U.S. 6,480,529). Sih is relied upon for outputting the matched filter results to a coherent accumulator. Sih is also relied upon for suggesting outputting data processed by the FFT subsystems to a non-coherent accumulator. Sih, however, does not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claims 7, 16, 19-20 and 23 are also patentable over the art of record for at least the reasons set forth above.

On page 11, the Official Action rejects claims 21 and 22 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Schuchman (U.S. 5,365,450). Schuchman is relied upon for suggesting a wide and low resolution search mode in GPS. Schuchman, however, does not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claims 21 and 22 are also patentable over the art of record for at least the reasons set forth above.

On page 12, the Official Action rejects claims 24, 26, 28 and 30 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Schuchman and Sih. Schuchman is relied upon for suggesting GPS operational modes such as cold start mode. Sih is relied upon for an incoherent summer that stores incoherent data. Neither Schuchman, Sih, nor their combination, however, make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claims 24, 26, 28 and 30 are also patentable over the art of record for at least the reasons set forth above.

On page 15, the Official Action rejects claim 25 under 35 U.S.C. §103(a) as being unpatentable over Rabenko, Schuchman, Sih and further in view of Sih and Rabenko. Sih is relied upon for producing coherent data which is transmitted to a subsystem. Rabenko is relied upon for suggesting an FFT subsystem. Neither Schuchman, Sih, nor their combination, however, make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 25 is also patentable over the art of record for at least the reasons set forth above.

On page 16, the Official Action rejects claim 27 under 35 U.S.C. §103(a) as being unpatentable over Rabenko, Schuchman, Sih and further in view of Sih and Rabenko. Sih is relied upon for suggesting incoherent data which is stored in coherent memory. Rabenko is relied upon for suggesting an FFT subsystem. Neither Schuchman, Sih, nor their combination, however, make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 27 is also patentable over the art of record for at least the reasons set forth above.

On page 16, the Official Action rejects claim 29 under 35 U.S.C. §103(a) as being unpatentable over Rabenko, Schuchman, Sih and further in view of Sih and Rabenko. Sih is relied upon for producing coherent data which is stored in coherent memory. Rabenko is relied upon for suggesting an FFT subsystem. Neither Schuchman, Sih, nor their combination, however, make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 29 is also patentable over the art of record for at least the reasons set forth above.

On page 16, the Official Action rejects claim 32 under 35 U.S.C. §103(a) as being unpatentable over Rabenko and further in view of Williams (U.S. 6,344,749). Williams is relied upon for suggesting an FFT subsystem having at least a number of inputs and transform size

configurable. However, Williams does not suggest that the inputs and transform size are configurable with respect to a low resolution and a high resolution operational in an SPS receiver. Thus, Williams does not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 32 is also patentable over the art of record for at least the reasons set forth above.

On page 17, the Official Action rejects claims 33-34, 36-38 and 42 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Williams and further in view of Rabenko. Neither Rabenko, Williams nor their combination, however, make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claims 33-34, 36-38 and 42 are also patentable over the art of record for at least the reasons set forth above.

On page 20, the Official Action rejects claim 35 under 35 U.S.C. §103(a) as being unpatentable over Rabenko, Williams and further in view of Kanack. Kanack is relied upon for suggesting a number of accumulations in an offset. Kanack, however, does not make up for the deficiencies of Williams and Rabenko with respect to the independent claims. Thus, dependent claim 35 is also patentable over the art of record for at least the reasons set forth above.

On page 20, the Official Action rejects claim 39 under 35 U.S.C. §103(a) as being unpatentable over Rabenko, Williams and further in view of Sih. Sih is relied upon for suggesting a configurable signal processing system. Sih, however, does not make up for the deficiencies of Williams and Rabenko with respect to the independent claims. Thus, dependent claim 39 is also patentable over the art of record for at least the reasons set forth above.

On page 20, the Official Action rejects claim 40 under 35 U.S.C. §103(a) as being unpatentable over Rabenko, Williams, Sih and further in view of Schuchman. Schuchman is relied upon for suggesting operational modes of a GPS receiver such as cold start. Schuchman, Williams, and Sih, however, do not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 40 is also patentable over the art of record for at least the reasons set forth above.

On page 21, the Official Action rejects claim 41 under 35 U.S.C. §103(a) as being unpatentable over Rabenko, Williams and Schuchman. Schuchman is relied upon for suggesting operational modes such as cold start mode in a GPS receiver. Schuchman, however, does not make up for the deficiencies of Williams and Rabenko with respect to the independent

claims. Thus, dependent claim 41 is also patentable over the art of record for at least the reasons set forth above.

On page 21, the Official Action rejects claim 44 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Williams (U.S. 6,344,749). Williams is relied upon for suggesting a number of inputs and transform size that are automatically configurable. Williams, however, does not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 44 is also patentable over the art of record for at least the reasons set forth above.

On page 22, the Official Action rejects claim 45 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Sih and Schuchman. Schuchman is relied upon for showing that GPS includes operational modes such as wide and low resolution searches. Schuchman and Sih, however, do not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 45 is also patentable over the art of record for at least the reasons set forth above.

On page 22, the Official Action rejects claim 50 under 35 U.S.C. §103(a) as being unpatentable over Rabenko in view of Horton (U.S. 6,421,696). Horton is relied upon for suggesting twiddle factors or algorithms used in Fourier transforms. Horton, however, does not make up for the deficiencies of Rabenko with respect to the independent claims. Thus, dependent claim 50 is also patentable over the art of record for at least the reasons set forth above.

On page 24, the Official Action rejects claims 1-4, 6, 8-15, 17-19, 31, 43 and 46-49 under nonstatutory obviousness-type double patenting as being unpatentable claim 1 of Falk (U.S. 7,639,180) in view of Rabenko.

On page 31, the Official Action rejects claim 5 under nonstatutory obviousness-type double patenting as being unpatentable over Rabenko, Falk and Kanack (U.S. 6,263,034).

On page 32, the Official Action rejects claims 7 and 20 under nonstatutory obviousness-type double patenting as being unpatentable over Rabenko, Falk and Sih (U.S. 6,480,529).

On page 32, the Official Action rejects claims 16 and 23 under nonstatutory obviousness-type double patenting as being unpatentable over claim 2 of Falk (U.S. 7,639,180) in view of Rabenko.

On page 33, the Official Action rejects claims 21 and 45 under nonstatutory obviousness-type double patenting as being unpatentable over claim 16 of Falk in view of Rabenko.

On page 34, the Official Action rejects claim 22 under nonstatutory obviousness-type double patenting as being unpatentable over Rabenko and Falk in view of Schuchman.

On page 35, the Official Action rejects claim 24 under nonstatutory obviousness-type double patenting as being unpatentable over claim 3 of Falk in view of Rabenko.

On page 36, the Official Action rejects claim 25 under nonstatutory obviousness-type double patenting as being unpatentable over claim 4 of Falk in view of Rabenko.

On page 36, the Official Action rejects claim 26 under nonstatutory obviousness-type double patenting as being unpatentable over claim 6 of Falk in view of Rabenko.

On page 37, the Official Action rejects claim 27 under nonstatutory obviousness-type double patenting as being unpatentable over claim 7 of Falk in view of Rabenko.

On page 37, the Official Action rejects claim 28 under nonstatutory obviousness-type double patenting as being unpatentable over claim 10 of Falk in view of Rabenko.

On page 38, the Official Action rejects claim 29 under nonstatutory obviousness-type double patenting as being unpatentable over claim 11 of Falk in view of Rabenko.

On page 39, the Official Action rejects claim 30 under nonstatutory obviousness-type double patenting as being unpatentable over claim 14 of Falk in view of Rabenko.

On page 40, the Official Action rejects claims 32-34, 36-39, 42 and 44 under nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of Falk in view of Rabenko and further in view of Williams.

On page 44, the Official Action rejects claim 35 under nonstatutory obviousness-type double patenting as being unpatentable over Falk, Rabenko, Williams and Kanack.

On page 44, the Official Action rejects claim 40 under nonstatutory obviousness-type double patenting as being unpatentable over claim 16 of Falk in view of Rabenko.

On page 45, the Official Action rejects claim 41 under nonstatutory obviousness-type double patenting as being unpatentable over Falk, Rabenko, Williams and Schuchman.

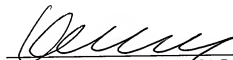
On page 50, the Official Action rejects claim 25 under nonstatutory obviousness-type double patenting as being unpatentable over Falk, Rabenko and Horton.

On page 46, the Official Action rejects claim 51 under nonstatutory obviousness-type double patenting as being unpatentable over claim 27 of Falk in view of Rabenko.

Applicants have filed a Terminal Disclaimer to overcome all of the double patenting rejections. Thus, withdrawal of the double patenting rejections are respectfully requested.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance which action is respectfully requested.

Respectfully submitted,



Kenneth N. Nigon, Reg. No. 31,549
Attorney for Applicants

RAE/nm

Attachment: Terminal Disclaimer

Dated: August 17, 2011

P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

1292432